

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 59-205468

(43)Date of publication of application : 21.11.1984

(51)Int.Cl.

C23C 9/02

C23C 9/02

C23C 11/02

C23C 13/02

(21)Application number : 58-080068

(71)Applicant : NATL RES INST FOR METALS

(22)Date of filing : 10.05.1983

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(54) HIGH TEMPERATURE CORROSION RESISTANT MATERIAL

(57)Abstract:

PURPOSE: To enhance the high temp. corrosion resistance of a material, which is obtained by providing a composite coating layer comprising Y-Al or Y-Cr to the surface of a heat resistant alloy, and to reduce the manufacturing cost thereof.

CONSTITUTION: Y is vapor deposited on the surface of a heat resistant alloy, for example, Ni-base or Co-base heat resistant alloy by a vacuum vapor deposition method, a chemical vapor deposition method or, especially pref., an ion plating method. In the next step, diffuse permeation treatment of Al or Cr is applied to the treated alloy. This diffuse permeation treatment may be applied, for example, by a method wherein the heat resistance alloy material after Y-vapor deposition is embedded in a powdery mixture consisting of an Al-metal powder or a Cr-metal powder, an Al₂O₃ powder and an NH₄Cl powder and subjected to heat treatment in a hydrogen stream.

LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or

application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's
decision of rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]

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Patent Abstracts of Japan

PUBLICATION NUMBER : 59205468
PUBLICATION DATE : 21-11-84

APPLICATION DATE : 10-05-83
APPLICATION NUMBER : 58080068

APPLICANT : NATL RES INST FOR METALS;

INVENTOR : YAMAZAKI MICHIO;

INT.CL. : C23C 9/02 C23C 9/02 C23C 11/02 C23C 13/02

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